



DOCKET NO.: H0498.70154US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Charles M. Lieber et al.
Serial No.: 09/935,776
Confirmation No.: 8935
Filed: August 22, 2001
For: DOPED ELONGATED SEMICONDUCTORS, GROWING SUCH
SEMICONDUCTORS, DEVICES INCLUDING SUCH
SEMICONDUCTORS AND FABRICATING SUCH DEVICES

Examiner: Shouxiang Hu
Art Unit: 2811

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 3 day of December 2004.


Signature

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

**STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 C.F.R. §§1.56, 1.97 AND 1.98**

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicants requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114. No fee or certification is required.

PART II: Information Cited

The Applicants hereby make of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicants hereby make the following additional information of record in the above-identified application.

The Applicants would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventors</u>
10/734,086	December 11, 2003	Lieber, et al.

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

Serial No.: 09/935,776
Conf. No.: 8935

- 3 -

Art Unit: 2811

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicants, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

By: 

Timothy J. Oyer, Ph.D., Reg. No. 36,628
Tani Chen, Sc.D., Reg. No. 52,728
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
Telephone: (617) 646-8000

Docket No.: H0498.70154US00
Date: 12/03, 2004
xNDDx

DEC 06 2004

FORM PTO-1449/A and B (Modified)

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 09/935,776

ATTY. DOCKET NO.: H0498.70154US00

FILING DATE: August 22, 2001

CONFIRMATION NO.: 8935

APPLICANT: Charles M. Lieber et al.

GROUP ART UNIT: 2811

EXAMINER: Shouxiang Hu

Sheet 1 of 3

U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
		3,873,359		Lando	03-25-1975
		3,873,360		Lando	03-25-1975
		3,900,614		Lando	08-19-1975
		5,252,835		Lieber et al.	10-12-1993
		5,512,131		Kumar et al.	04-20-1996
		5,581,091		Moskovits et al.	12-03-1996
		5,726,524		Debe	03-10-1998
		5,840,435		Lieber et al.	11-24-1998
		5,864,823		Levitan	01-26-1999
		6,159,742		Lieber et al.	12-12-2000
		6,190,634	B1	Lieber et al.	02-20-2001
		6,286,226	B1	Jin	09-11-2001
		6,559,468	B1	Kuekes et al.	05-06-2003
		6,716,409	B2	Hafner et al.	04-06-2004
		2002/0084502	A1	Jang et al.	07-04-2002
		2002/0112814	A1	Hafner et al.	08-22-2002
		2002/0117659	A1	Lieber et al.	08-29-2002
		2002/0122766	A1	Lieber et al.	09-05-2002
		2002/0130353	A1	Lieber et al.	09-19-2002
		2002/0146714	A1	Lieber et al.	10-10-2002
		2002/0172820	A1	Majumdar et al.	11-21-2002
		2002/0175408	A1	Majumdar et al.	11-28-2002
		2003/0089899	A1	Lieber et al.	05-15-2003
		2003/0156992	A1	Anderson et al.	08-21-2003
		2003/0200521	A1	DeHon et al.	10-23-2003
		2004/0005723	A1	Empedocles et al.	01-08-2004
		2004/0095658	A1	Buretea et al.	05-20-2004
		2004/0106203	A1	Stasiak et al.	06-03-2004
		2004/0112964	A1	Empedocles et al.	06-17-2004
		2004/0118448	A1	Scher et al.	06-24-2004
		2004/0136866	A1	Pontis et al.	07-15-2004
		2004/0146560	A1	Whiteford et al.	07-29-2004

FORM PTO-1449/A and B (Modified)

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 09/935,776

ATTY. DOCKET NO.: H0498.70154US00

FILING DATE: August 22, 2006

CONFIRMATION NO.: 8935

APPLICANT: Charles M. Lieber et al.

GROUP ART UNIT: 2811

EXAMINER: Shouxiang Hu

Sheet 2 of 3

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
		WO	95/02709	A2	President & Fellows of Harvard College	01-26-1995	
		WO	96/29629	A2	President & Fellows of Harvard College	09-26-1996	
		WO	97/33737	A1	President & Fellows of Harvard College	09-18-1997	
		WO	97/34025	A1	President & Fellows of Harvard College	09-18-1997	
		WO	00/51186	A2	Clawson	08-31-2000	
		WO	02/080280	A1	Regents of The University of California	10-10-2002	
		WO	03/053851	A2	President & Fellows of Harvard College	07-03-2003	
		WO	03/063208	A2	California Institute of Technology	07-31-2003	
		WO	04/010552	A1	President & Fellows of Harvard College	01-29-2004	
		WO	04/032190	A2	Nanosys, Inc.	04-15-2004	
		WO	04/032193	A2	Nanosys, Inc.	04-15-2004	
		WO	04/034025	A2	Nanosys, Inc.	04-22-2004	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
		DUAN, X., et al., "Single-nanowire electrically driven lasers," <i>Nature</i> , 421 , (2003), pp. 241-245.	
		GIVARGIZOV, E.I., et al., "Fundamental Aspects of VLS Growth," <i>J. Crystal Growth</i> , 31 , (1975), pp: 20-30	
		GUDI KSEN, M.S., et al., "Size-Dependent Photoluminescence from Single Indium Phosphide Nanowires," <i>J. Phys. Chem. B</i> , 106 , (2002), pp. 4036-4039	
		HIRUMA, K., et al., "Self-organized growth of GaAs/InAs heterostructure nanocylinders by organometallic vapor phase epitaxy," <i>J. Crystal Growth</i> , 163 , (1996), pp: 226-231	
		HOLMES, et al., Control of Thickness and Orientation of Solution-Grown Silicon Nanowires, <i>Science</i> , 287 , (2000), pp. 1471-1473	
		HU, S.-Y., "Serpentine Superlattice Nanowire-Array Lasers," <i>J. Quant. Electron.</i> , 31 (8), (1995), pp. 1380-1388	
		HUANG, M., et al., "Room-Temperature Ultraviolet Nanowire Nanolasers," <i>Science</i> , 292 , (2001), pp. 1897-1898	
		JOHNSON, J.C., et al., "Single gallium nitride nanowire lasers," <i>Nature Materials</i> , 1 , (2002), pp. 106-110	
		JOHNSON, J.C., et al., "Single Nanowire Lasers," <i>J. Phys. Chem.</i> , 105 (46), (2001), pp. 11387-11390	
		KONG, J., et al., "Chemical vapor deposition of methane for single-walled carbon nanotubes," <i>Chem. Physics Letters</i> , 292 , (1998), pp: 567-574	
		KONG, J., et al., "Synthesis of individual single-walled carbon nanotubes on patterned silicon wafers," <i>Nature</i> , 395 , (1998), pp: 878-881	
		MARTEL, R., et al., "Single- and multi-wall carbon nanotube field-effect transistors," <i>Appl Phys Lett</i> , 73 (17), (1998), pp: 2447-2449	
		THESS, A., et al., "Crystalline Ropes of Metallic Carbon Nanotubes," <i>Science</i> , 273 , (1996), pp: 483-487	

DEC 06 2004

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

APPLICATION NO.: 09/935,776

ATTY. DOCKET NO.: H0498.70154US00

FILING DATE: August 22, 2001

CONFIRMATION NO.: 8935

APPLICANT: Charles M. Lieber et al.

GROUP ART UNIT: 2811

EXAMINER: Shouxiang Hu

Sheet 3 of 3

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
		WANG, N., et al., "SiO ₂ -enhanced synthesis of Si nanowires by laser ablation," <i>App. Physics Letters</i> , 73(26), (1998), pp: 3902-3904	
		WONG, S., et al., "Covalently functionalized nanotubes as nanometre-sized probes in chemistry and biology," <i>Nature</i> , 394, (1998), pp: 52-55	
		YANG, P. et al., "Controlled Growth of ZnO Nanowires and Their Optical Properties," <i>Adv. Funct. Matter</i> , 12(5), (2002), pp. 323-331	
		ZHOU, G., et al., "Growth morphology and micro-structural aspects of Si nanowires synthesized by laser ablation," <i>J. of Crystal Growth</i> , 197, (1999), pp: 129-135	
		Office Action mailed 6/25/04 in U.S. Patent Application No. 10/020,004, filed 12/11/2001	
		Office Action mailed 6/30/04 in U.S. Patent Application No. 10/196,337, filed 07/16/2002	
		International Search Report in PCT Application No. PCT/US03/22061, Int'l Filing Date, 7/16/03	
EXAMINER		DATE CONSIDERED	

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. __, filed __, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).